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ORS

Office of Radiological Security

Protect • Remove • Reduce

Information Requirements for the Secure Transportation of Radioactive Sources

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NNSA
National Nuclear Security Administration

Global
Material
Security



Source Information Needed

- Information Required prior to recovery operation
 - Listing of sources from each recovery site including:
 - ✦ Isotope for each source (e.g. Cs137, Co60, Ir192, Am241)
 - ✦ Activity for each source
 - ✦ Physical dimensions of each source
 - ✦ Are sources located in devices?
 - ✦ Source integrity (Are any sources leaking?)

How to Obtain Required Information

- Does the national database provide a listing of each source along with isotope and activity?
- Does the facility have photos of the source?
- Are visible markings on the source or device?
- Does the facility have drawings of the source from the manufacturer?
- Are the sources listed on the facilities license?
- Does the facility have recent leak test data?

National Database

- Check the database to determine if the sources are listed.
- If sources in the database, determine the following:
 - Isotope
 - Activity
 - Manufacture date
- If information is not in database use other methods to find source information

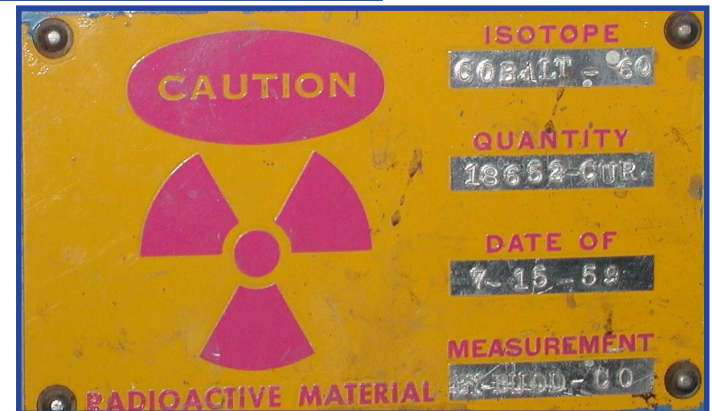
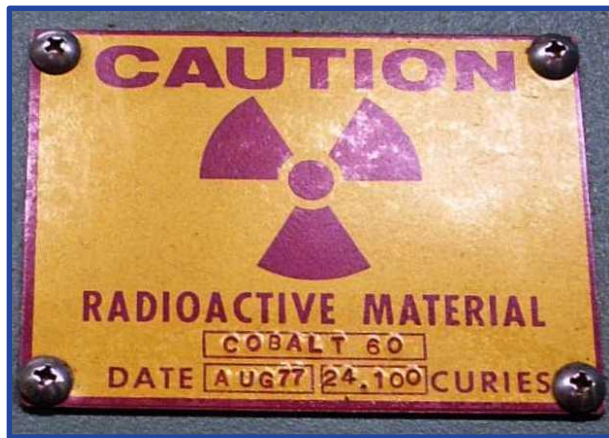
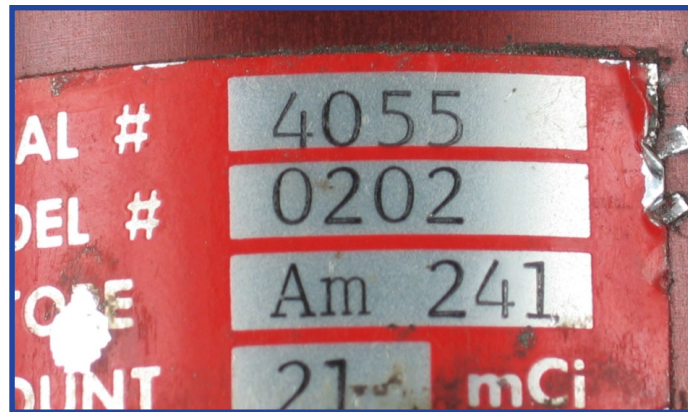
Source Markings

- Contact source owner and request photo of source to determine if marking are visible on the source



Source in Devices

- Was the source removed from a device?
- Examine the device tag to obtain the information on the source





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Information from Source Owner

- Does the source owner have a license or other information that identifies the source isotope and activity?
- Does the source owner have a current leak test to demonstrate the source is not leaking?
- Does the source owner have shipping papers when he received the source?
- Can the source owner provide the source dimensions?
- Are the sources in a device?

Developing a Recovery Plan

- Identify the highest activity sources that will be transported in the StopBox
- Designate one container in the StopBox for those sources
- Calculate the thickness of lead shielding needed
- Determine the physical size of the high activity sources
- Determine the smallest shielded container required to house the high activity sources (Multiple shields are OK.)